HILL FIELD, ARMAMENT REPAIR SHOP
(HILL FIELD, BUILDING 272)
(HILL FIELD, A/M ENGINEERING SHOP)
(HILL FIELD, BUILDING E-172)
5836 A Lane
Layton Vicinity
Davis County
Utah

HAER No. UT-85-V

HAER
UTAH
6-LAY.V,
2V-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Rocky Mountain System Support Office
National Park Service
P.O. Box 25287
Denver, Colorado 80225-0287

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HAER No. UT-85-V

Location: 5836 A Lane, Hill Air Force Base, Layton Vicinity, Davis County, Utah

UTM: 12-418560-4551560

Date of Construction: 1943

Architect: Unknown

Builder: Unknown

Present Owner: Hill Air Force Base

Present Use: Maintenance

Significance: Aircraft armament was repaired in Building 272 of the Ogden Air Depot/Ogden Air Materiel Command (OOAMA) Hill Field/Air Force Base during and after World War II. This building provides particularly vivid images of the processes involved in the overall repair and maintenance of aircraft, a crucial component of Hill Field's overall mission to support Pacific and European theaters of military operation during World War II. In addition, it contributes to a deeper understanding of the early development of the U.S. Army Air Corps, a branch of the Army which eventually became the U.S. Air Force. Hill Field was one of only two air depots established in the United States during the tumultuous years immediately preceding World War II.

History: Building 272 housed the aircraft armament repair facilities for Hill Field. Most of the World War II era planes serviced on the Base were equipped with armament of some type. Bombers (such as B-24s and B-29s) carried bombs, and fighter escorts (such as P-47s and P-51s) often held machine guns. These planes were dismantled in the Aircraft Repair Hangars (Building 225), and specific parts like engines, propellers, flight instruments, and armament were repaired or manufactured in surrounding shops like Building 272 and then reassembled to aircraft in the hangars.

Quotas set by Air Command were rarely met in the beginning months of World War II. Materials were often difficult to procure and the majority of special tools were unobtainable and had to be designed and manufactured on the Base. As the war progressed, these obstacles began to subside. A shortage of special parts, tools, equipment, and adequate working space continued to present challenges, but in gradually reduced proportion. Many items continued to be manufactured by the depot shops as the needs for them became sufficiently urgent.

Parts shortages again surged during the Korean Conflict of the early 1950s. In order to expedite the completion of projects, armament and other parts were frequently removed from the last planes in a repair line, repaired, and then reinstalled on planes that were ahead of the original planes. This enabled each early phase of production to proceed without delay, but often resulted in a crisis when the last plane was ready to receive unavailable parts. Sometimes, the parts arrived from other installations in time to complete the last planes in a line without delay, but often, the parts were unavailable from other sources and were manufactured locally.

In efforts to increase efficient production methods, all aircraft repair activity was carefully monitored and controlled by the Production Control Branch. The status of aircraft, armament, and other parts could be accurately determined at any of the various stages of production. The Branch obtained and disseminated technical information to workers and handled technical correspondence, including all official long distance telephone calls pertaining to the engineering department. As the Production Control Branch gathered statistics, employees and materials could be more efficiently allocated among the departments.

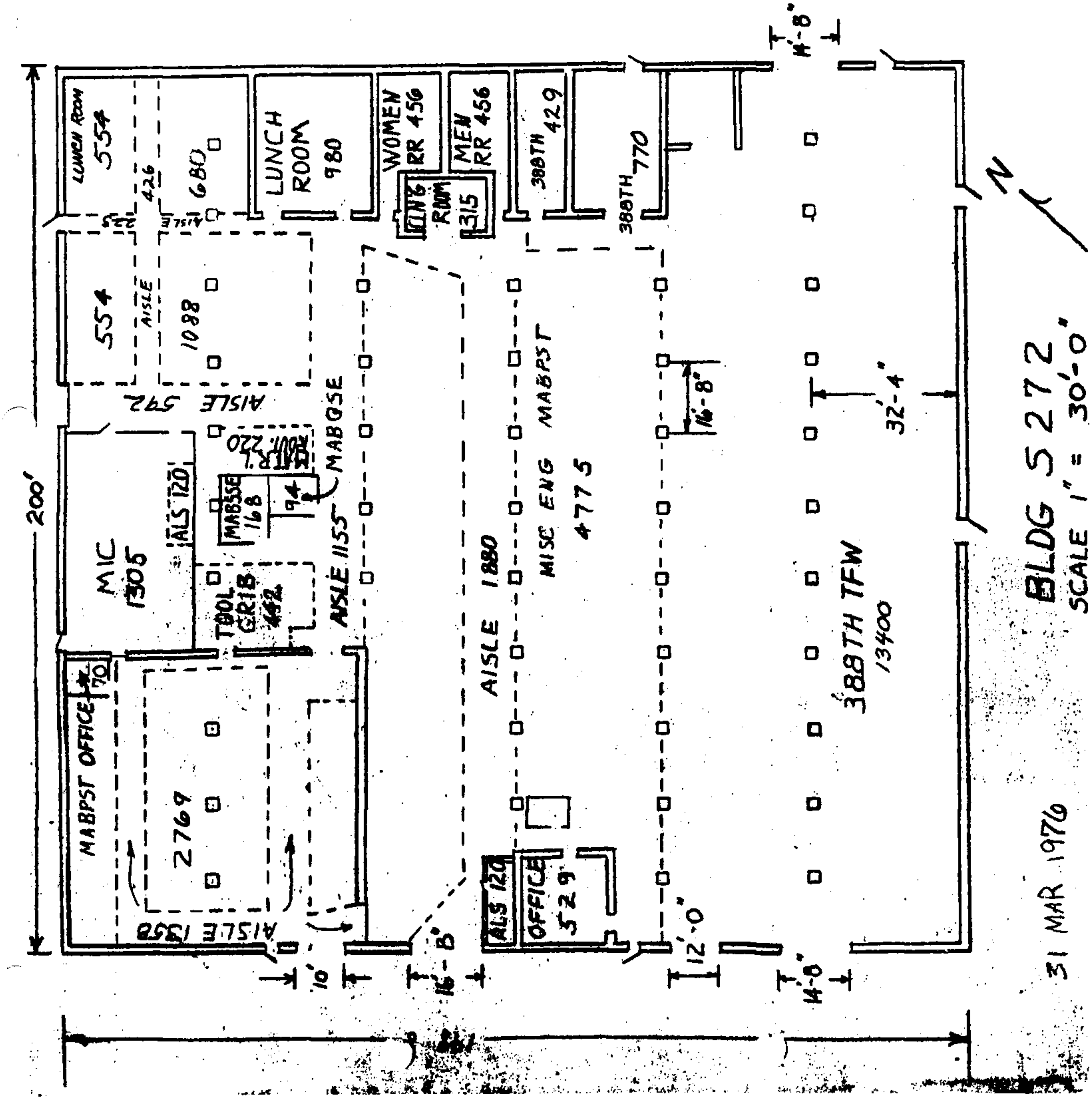
Coordination between departments came gradually as the units began to understand their relationship to each other and as specialized labor and production line methods became widespread. Even with careful planning, though, operations progressed at different rates in each department. Frequent rush orders or parts shortages caused congestion in the production lines that disrupted the interdepartmental flow.

Building 272 also housed the Machine Tools Unit, that manufactured and repaired tools that were used by mechanics in maintenance shops throughout the Base. The crew experienced many difficulties during World War II because competition with other defense activities eliminated the possibility of obtaining experienced aircraft engine machinists. In 1942, the foreman was the only worker familiar with aircraft overhaul work, and available equipment was very

limited. Each engine being repaired in Building 265 required different jigs and unique procedures for accurate and precise work. Many jigs were unavailable, and several on hand were unidentified and unlabeled. Because employees were unfamiliar with their appearance and use, many projects were delayed. Most of the employees referred to the Air Command Technical Orders for each step of the process, and did their best to improvise alternative procedures when a prescribed tool or part was lacking.

General Description: Building 272 is a large, square, one-story, industrial structure with a flat roof. The building is constructed from wood frame over a concrete foundation. Exterior walls are covered with wood shingles and feature a continuous rhythm of wide double-hung windows along each facade.

There have been minor modifications to the building since its completion. Most of the original wooden sash windows have been replaced with contemporary double-hung windows. The interior has remained almost the same since 1953. Workshops are located along the north wall and administrative spaces are located along the east wall. The rest of the interior space is an open, column-filled space. The columns are located 16'8" by 33'0" on center. The room partitions align themselves to this structural grid.


BLDG 5272
SCALE 1" = 30'-0"
31 MAR 1976
200'
LUNCH ROOM 554
LUNCH ROOM 980
WOMEN RR 456
MEN RR 456
388TH 429
388TH 770
554
1088
AISLE 592
MIC 1305
ALS 120
MABSSE 168
TOOL CRIB 442
AISLE 1155
MABQSE
MABPST OFFICE
70
2769
AISLE 1350
AISLE 1880
MISC ENG MABPST 4775
ALS 120
OFFICE 529
388TH TFW 13400
32'-4"
16'-8"
12'-0"
14'-8"
16'-8"
10'